

including all of the limitations of the base claim and any intervening claims.

The Examiner's attention is brought to his inconsistent positions with regard to Claim 8 and to his failure to comment upon the patentability of the invention as defined by pending Claim 10. Nevertheless, the following remarks are made in support of the invention as defined by each of pending Claims 1 through 10.

The Examiner has relied upon a single reference, Fell et al., in rejecting method Claims 1 and 2 and apparatus Claims 7 and 8. Generally speaking, the it is the Examiner's position that the Applicant's method for determining the zero-point error of a Coriolis gyro is taught by (1) viewing the voltage 15 of Fell et al. as Applicant's "disturbance force applied to it [the resonator of the gyro] such that a change in the stimulation oscillation of the resonator is brought about" and (2)  $V_{AGC}$  (output of adjustment means 30) is "a measure of the zero-point error [of a Coriolis gyro]".

Before analyzing the analogies of the Examiner, it is important to note that the claimed invention is directed to compensation of the coupling of "stimulation oscillation" into

the "read oscillation". Without such compensation, a zero-point error (due to manufacturing tolerances) is observed. In contrast, Fell et al. is directed the reduction in amplitude of the primary mode vibration so that smaller force is required to null the induced Coriolis force. Fell et al. accomplishes this purpose by adjusting the scale factor of the gyroscope.

Taking the above into consideration, the voltage 15 of Fell et al., relied upon by the Examiner as analogous to Applicant's disturbance force, is the voltage reference level of the primary oscillation. This is a fixed value in Figure 2 of Fell et al. (see paragraph 0008) that may be adjusted to be dependent upon rotation rate  $\Omega_{APP}$  (see paragraph 0035). Thus, in contrast to the Examiner's position, the voltage 15 cannot be considered an exogenous "disturbance" as it is relied upon by Fell et al. to set the primary oscillation. Accordingly, the Examiner's position that requires, in part, that voltage 15 satisfy the limitation "disturbance force applied to it [the resonator of the gyro] such that a change in the stimulation oscillation of the resonator is brought about" is not met by Fell et al.

The "zero rate value" of Fell et al. is totally different from the "zero point error" of the Applicant's

invention. Zero rate error describes the amplitude of the  $V_{AGC}$  for small applied rotation rates  $\Omega_{APP}$  rather than for compensating the effect of coupling from the stimulation oscillation to the read oscillation. Thus, zero rate value is entirely unrelated and separate from zero-point error and the teachings of Fell et al. offer no solution to the problem addressed by the claimed invention.

Claim 1 and the claims that depend therefrom are directed to a method for determining the zero-point error of a Coriolis gyro. Such method claims include, among other limitations, "the resonator of the Coriolis gyro has a disturbance force applied to it such that a change in the stimulation oscillation of the resonator is brought about". As discussed above, the cited reference provides no teaching of or analogy to such limitation. Accordingly the teachings of Claim 1 and the claims that depend therefrom are not anticipated by Fell et al.

Claim 7 and the claims that depend therefrom are directed to a Coriolis gyro characterized by a device for determining the zero-point error of the Coriolis gyro. Such claims include, among other limitations, "a disturbance unit which applies a disturbance force to the resonator of the

Coriolis gyro such that the stimulation oscillation of the resonator is modulated." (Emphasis added.) The voltage 15 of Fell et al. Upon which the Examiner relies as described above is not modulated. Thus the apparatus claims of the application (Claims 7 through 10) are clearly not anticipated as alleged by the Examiner.

For the foregoing reasons, all presently-pending claims define patentable subject matter. Prompt allowance and issuance of all such pending claims is therefore earnestly solicited.

Respectfully submitted,



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